

TECHNICAL DATA SHEET

Thinset Block Jointing Mortar for AAC blocks and Concrete Blocks

Description

Dalmia Magic INNOBOND is a versatile thinset block jointing mortar for thin bed applications. It is to be used as grey cement based non-shrink and self-curing mortar. This mortar is specially designed to provide stronger, much more durable bonding between the blocks with optimum adhesive strength.

Characteristics / Advantages

- Strength - High tensile adhesion strength and compressive strength improving the overall masonry strength.
- Better Bond - Better and improved bond than conventional mortar.
- Better Workability - Faster to apply due to good spreadable properties.
- Excellent water retention properties
- No Shrinkage cracks at joints.
- Longer POT Life
- Self-curing – No curing required post application.
- Excellent Coverage and ease of application.
- Save on cost and time to conventional mortar and process of lengthy site mixing

Area of Application

For interior and exterior use, for preparing thin bed mortar for AAC blocks, Light Weight Concrete Blocks, Cellular Concrete Blocks, Concrete Blocks and Concrete hollow blocks.

Surface Preparation

- The surface to be structurally stable and sound, clean and free from dirt, oil, grease, loose particles and other contaminant.
- Pre-wetting of substrate is essential with maximum saturation of water but saturated surface dry (S.S.D.) condition.

Technical Specification

Technical parameters comply with ASTM C 1660-09

Property	Specifications
Base	Polymer modified Cementitious block jointing mortar
Appearance/Colour	Grey powder
Dry Bulk Density (gm/Ltr.) (ASTM D 1895B)	1050 to 1100 gm/Ltr.
Density of Fresh Adhesive (gm/Ltr.) (BS EN 1015-6 : 1999)	1800 to 1850 gm/Ltr
Compressive Strength (BS EN 1015-11: 1999)	≥ 12.0 N/mm ²
Tensile Adhesion Strength (EN 1348)	≥ 0.6 N/mm ²
Flexural Strength (BS EN 1015-11 : 1999)	≥ 4.0 N/mm ²
Water Retention (%) (BS 4551 : 2005 + A2 : 2013)	≥ 99.5 %
Air Content (%) (BS EN 1015-7 : 1999)	< 15.0 %
Consistency of Fresh Adhesive (Flow in mm) (BS EN 1015-3 : 1999)	160 mm @ 30% Water (Plastic Adhesive)
Water powder ratio	35-40 : 100
Pot Life	3 Hrs.
Shelf Life	6 months from the date of production
Consumption	2.5-2.90 Kg/m ² for 3 mm average thickness
Layer thickness	3 mm average thickness
Ambient Air Temperature for Application	Minimum: 5 °C, Maximum: 40 °C
Substrate Temperature for Application	Minimum: 5 °C, Maximum: 40 °C
Storage Condition	Store properly in original unopened, sealed and undamaged packaging in dry condition

Mortar Mixing

Mortar Mixing: Dalmia Magic INNOBOND requires 35-40 % of water by weight of material. Water : Powder = 35-40 to 100 by weight (14 litre to 16 litre water per 40 kg bag).

Mixing Time: 3-5 minutes (minimum). Mixing to the measured quantity of water using mechanical stirring for 5 minutes to ensure a consistency free of lumps.

Application

- Dalmia Magic INNOBOND must be mechanically mixed using a forced action mixer or in a clean container using a drill and mixing paddle (< 500 rpm). A normal concrete mixer is not suitable. Mix thoroughly with clean water for a minimum of 3 minutes. Leave material to stand in container until the majority of bubbles have dispersed (minimum 5 minutes). Then re-mix the material for 15 seconds - the product is now ready for use.
- If the substrate is very porous, if the temperature is high and/or the relative humidity low, it is advisable to dampen the surface. Do not leave any standing water.
- Water required is 35-40 % of the weight of the powder. Use approx. 14 to 16 liters of potable water per 40 Kg bag of Dalmia Magic INNOBOND. Take water in the container and slowly add the powder into the water while mixing by hand or slow speed mixing machine. Mix for 3 to 5 minutes till a smooth buttery thixotropic mix without lumps is obtained.
- Ensure that no powder is left unmixed at the bottom of the vessel. The Dalmia Magic INNOBOND is now ready for application.
- Apply a thin uniform Layer of Dalmia Magic INNOBOND 2 to 3 mm thick on the clean & levelled surface of masonry units using proper trowel. It is recommended to apply with notch trowels for attaining uniform thickness of 3 mm consistently.
- Mortar should be spread on all sides of block in such a way to maintain the bond thickness 2-3 mm.

- Avoid using Dalmia Magic INNOBOND in slurry form to avoid generation of air pockets between the AAC Blocks and further cracks.
- Place the next course of masonry units on evenly jointing mortar bed in proper line & level. Each masonry unit shall be properly bedded and set in position by gently pressing with handle of trowel.
- Use Spirit Level/plumb for checking the level of wall and fibre hammer to remove any air gaps in between blocks for proper jointing and alignment.
- Inside unit of the masonry unit shall be applied with mortar before the next unit is laid & pressed against it especially in case of bricks. Clean the excess material, if any immediately.
- Clean tools and containers with water while adhesive is fresh.
- Continue the procedure for the entire masonry work.
- The setting time is affected by climatic conditions, allow stand-alone time accordingly.
- Do not disturb the blocks /bricks setting for first 24 hours.

Coverage Estimate

150 to 170 Sq.ft/40 Kg for 3 mm average thickness depending on the quality of the applied substrate, based on application and weather conditions.

Storage and Shelf Life

Should be stored in a dry place and protected against moisture. We recommend not exceed 6 months from the date of production. Storage beyond the date specified does not necessarily mean that the material is unusable, but the user should perform a quality check on the properties necessary for the intended application.

Coverage Table @ 3mm Thickness and Mixing ratio 35 – 40 : 100 (Water: Powder)

Block Size (mm)			Wall Area Covering (in Sq.ft. /40 Kg Bag)	Jointing Surface Area of 1 Block (in Sq.ft.)	Dalmia Magic INNOBOND Required (in Kg/Block)
Length	Height	Thickness			
600	200	75	150 to 170	1.45	0.37
600	200	100	150 to 170	1.51	0.39
600	200	125	150 to 170	1.56	0.40
600	200	150	150 to 170	1.61	0.41
600	200	175	150 to 170	1.67	0.43
600	200	200	150 to 170	1.72	0.44
600	200	230	150 to 170	1.79	0.46
600	200	300	150 to 170	1.94	0.50
600	250	75	150 to 170	1.82	0.46
600	250	100	150 to 170	1.88	0.48
600	250	125	150 to 170	1.95	0.50
600	250	150	150 to 170	2.02	0.52
600	250	175	150 to 170	2.09	0.53
600	250	200	150 to 170	2.15	0.55
600	250	230	150 to 170	2.23	0.57
600	250	300	150 to 170	2.42	0.62

NOTE: In order to realize all the product advantages, for high quality construction and best performance, it is necessary to follow the AAC Block Manufacturer's instructions or IS 6041 or other relevant codes and good practices.



Packaging

Available in 40 Kg bags.

Limitation

Cementitious substrates must be at least 28 days old. Do not exceed the recommended water dosage. Apply only to sound, prepared substrates. Do not exceed the maximum layer thickness. Protect freshly applied material from freezing and rain etc.

Precaution

Although Dalmia Magic INNOBOND does not contain any toxic material, it is advisable to wear suitable protective clothing, gloves and eyes/face protection. In case of contact with skin and eyes, please rinse immediately with plenty of clean water and seek medical advice if required. Keep the product out of reach of children.

Additional Information

The information supplied in the data sheet is based on the outcome of extensive in-house research and development. We reserve the right to update this information from time to time without prior notice. We guarantee the consistent high quality of our product, however since we have no control over site conditions or the execution of the work at site, we accept no liability for any loss or damage which may arise as a result thereof.